

City of Rockville
111 Maryland Avenue
Rockville, MD 20850

Inspection Services Division
240-314-8240
Inspection Request Line
240-314-5040

CONSTRUCTION REQUIREMENTS FOR WOOD DECKS

- General:** Construction of wood decks shall conform to the 2003 International Residential Code and City of Rockville Amendments Section 507. In case of unusual or complex design, the stamp of a Maryland registered architect or engineer may be required.
- Live Load:** The minimum uniformity distributed live load for wood frame decks shall be 60 psf.
- Footings:** The minimum footing size shall be 16 inches x 16 inches x 8 inches in depth, with the bottom of the footing a minimum of 24 inches below grade. Increased size or load factors may require a larger footing as determined by the code official.
- Posts:** 4x4 posts may be used for decks under ten (10) feet above grade. A minimum post size of 6x6 must be used for decks ten feet or more above grade.
- Attachment:** Decks may be attached to structures by the use of ledger boards bolted to solid dimension lumber, using 1/2" diameter bolts at not more than 16 inch intervals. Ledger boards can not be attached directly to plywood, nondimensional bands, or truss joists. Deck structures can not be attached to building cantilevers or to chimneys.
- Joist Hangers:** Joist hangers shall be secured in accordance with the manufacturer's recommendations, including use of special nail type. Manufacturer's recommendations must be on the jobsite for review by the inspector.
- Cantilevers:** Cantilevers shall be limited to a maximum of 1/3 of the adjacent clear span, maximum 3 feet, designed in accordance with standard engineering practices.
- Flooring:** 5/4 decking shall be limited to a maximum joist spacing of 16 inches. 2x4 and larger decking shall be limited to a joist spacing of not more than 24 inches.
- Stairs:** Stairs shall be constructed using stringers every 18 inches. The maximum riser height shall be 8 1/4 inches, and minimum tread depth shall be 9 inches. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch. The greatest tread run within any flight of stairs shall not exceed the smallest by more than 3/8 inch. When risers are closed, all treads may have a uniform projection not to exceed 1 1/2 inches.
- Handrails:** Handrails shall be installed for all stairs with four or more risers, and shall meet the requirements of Section 311, 2003 IRC. Handrail posts shall be attached using a minimum of 1/2 inch diameter bolts per post.

- Guardrails: Deck floor surfaces located more than 30 inches above the floor or grade below shall have guardrails meeting the requirements of Section 312, 2003 IRC. The use of wood lattice in lieu of intermediated pickets or rails is prohibited. Guardrails shall not have an ornamental pattern that would provide a ladder effect.
- Illuminations: All exterior stairs shall be provided with a means to illuminate the stair, including the landing and treads. Exterior stairs shall be provided with an artificial light source rated for a minimum of 850 lumens located in the immediate vicinity of the top landing of the stair. (Sec. 303.6, 2003 IRC). The illumination of exterior stairs shall be controlled from inside the dwelling unit unless continuously illuminated or automatically activated.(Sec. 303.6.1, 2003 IRC)
- NOTE: DECKS MAY NOT BE CONSTRUCTED CLOSER TO A FIREPLACE VENT TERMINATION CAP THAN THE MINIMUM CLEARANCE SPECIFIED BY THE MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR THAT SPECIFIC VENT ASSEMBLY.
- Inspections: In order to determine correct and sufficient deck attachment, framing inspections will include verification by the inspector that the ledger is bolted to an acceptable band. This may require an inspection from the interior of the structure after the ledger has been bolted. If a finished ceiling is in place preventing visual inspection of the band board and bolting, the ceiling section must be removed to allow for inspection, or the deck maybe designed and constructed as an independent structure, eliminating the need to inspect the band and ledger bolting.

REQUIRED DECK INSPECTIONS

1. Footing Inspection: to be made prior to placement of concrete.
2. Ledger Attachment Inspection: to verify ledger is attached correctly.
3. Frame and Final inspection: to verify construction complies with approved plans and the construction requirements or wood decks.

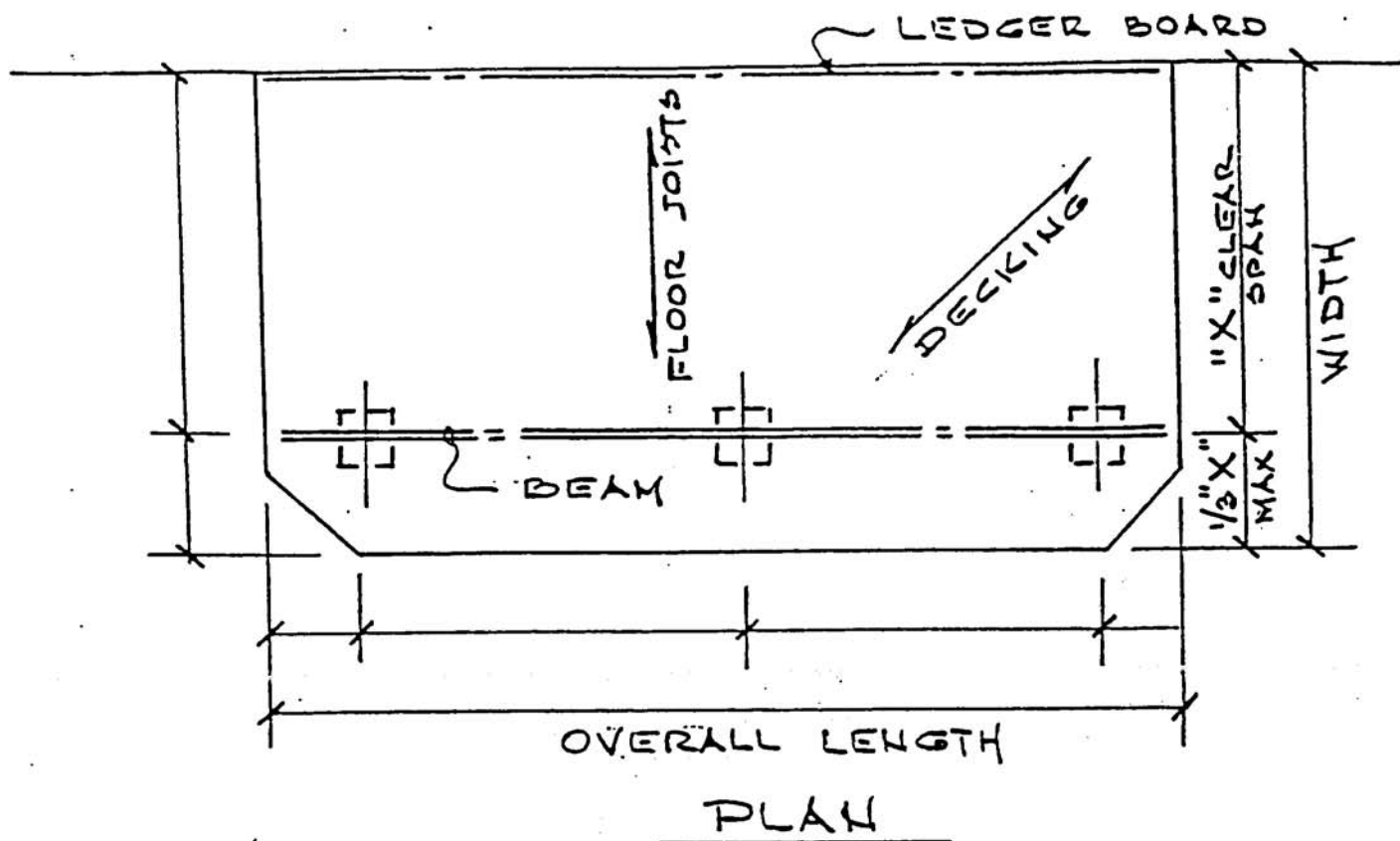
APPROVED PLANS ARE REQUIRED TO BE AVAILABLE ON-SITE, IN ORDER FOR AN INSPECTION TO BE CONDUCTED.

Allowable Span for Beam / Girders Supporting One floor Only										
Size of the Beam	Floor Live Load (PSI)	Space of "S" / Tributary Load to Beam Spacing in Feet								
		4	5	6	7	8	9	10	11	12
(2)2X6	60	6'6"	6'0"	5'6"	5'0"	4'6"	4'6"	4'0"	4'0"	4'0"
(2)2X8	60	8'6"	8'0"	7'6"	7'0"	6'6"	6'0"	5'6"	5'6"	5'0"
(2)2X10	60	11'6"	10'6"	9'6"	8'6"	8'0"	7'6"	7'0"	7'0"	6'6"
(2)2X12	60	13'6"	12'6"	11'6"	10'6"	10'0"	9'6"	9'0"	8'6"	8'0"

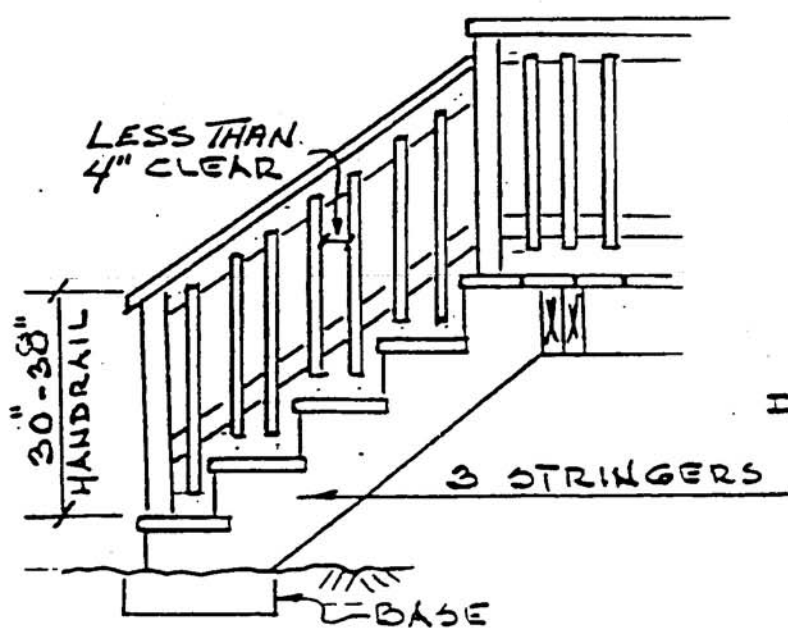
Spans are based on #2 grade lumber

The spacing "S" is the tributary load to the beam / girder. It is found by adding the unsupported spans of the floor joist on each side which are supported by the beam / girder, and divide by 2.

<div> <div>Floor Joist Spans</div> <div> 60 lbs Live Load 10 lbs dead load </div> <div>#2 grade P.T. Pine L/360</div> </div>											
Spans (Feet and inches)											
2X6			2X8			2X10			2X12		
12"o.c	16"o.c	24"o.c	12"o.c	16"o.c	24"o.c	12"o.c	16"o.c	24"o.c	12"o.c	16"o.c	24"o.c
9'0"	8'2"	7'2"	11'9"	10'9"	9'4"	15'0"	13'3"	12'0"	18'0"	16'8"	14'6"



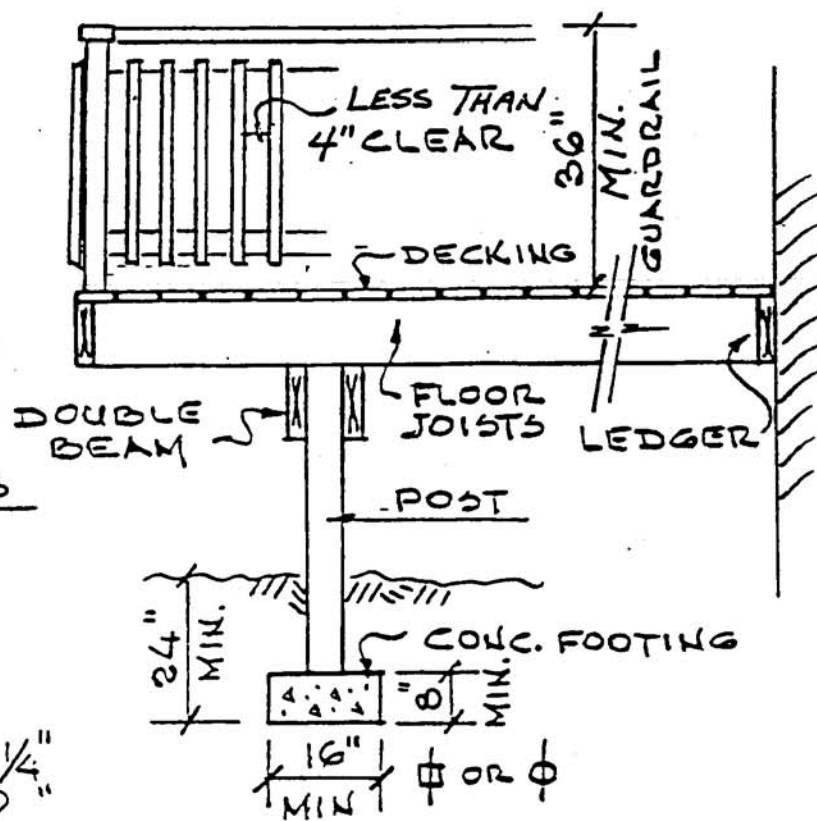
EXAMPLE ONLY NOT FOR PLAN SUBMITTAL



NOTE:

MAX. RISER $8\frac{1}{4}"$
MIN. TREAD 9"

TYP. STEPS



TYP. SECTION